



## Vascular Disease

### PREDICTION OF CARDIOVASCULAR EVENTS WITH AORTIC STIFFNESS IN PATIENTS WITH ERECTILE DYSFUNCTION

ACC Moderated Poster Contributions

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**Background:** Erectile dysfunction (ED) confers an independent risk for cardiovascular (CV) events and total mortality. Aortic pulse wave velocity (PWV) is a predictor of CV events and all-cause mortality. We investigated whether PWV predicts major adverse cardiovascular events (MACE) in ED patients beyond traditional risk factors.

**Methods:** MACE in relation to PWV were analyzed in 376 patients (mean age 57 y/o).

**Results:** During a median follow-up of 3.4 years, 33/376 patients (8.8%) experienced a MACE. PWV was associated with MACE and CAD events and the differences between PWV tertiles were significant (figure). Subjects in the highest PWV tertile ( $>9.2$  m/s) had a 4-fold higher risk of MACE compared to those in the lowest tertile ( $<8.0$  m/s, adjusted HR 3.98,  $P=0.022$ ). The highest tertile was associated with a higher risk of MACE in patients with intermediate Framingham risk score (adjusted HR 3.70,  $P=0.011$ ), but not in men with high Framingham score. A PWV value of 7.88 m/sec was associated with a negative predictive value (ability to "rule out" MACE) of 96.8%. Addition of PWV to standard risk factors model yielded correct patient reclassification to higher or lower risk category by 16.1% ( $P<0.001$ ) in the whole cohort and by 8.5% ( $P=0.0226$ ) in the intermediate risk group.

**Conclusion:** Higher aortic stiffness is associated with increased risk for a MACE in ED patients. Aortic PWV improves risk prediction when added to standard risk factors and may represent a valuable biomarker of CV risk prediction in these patients.

